

CLAIMS

1. An image signal processing method for performing nonlinear compensation on an image signal to be fed into a display device, the
5 method comprising:

changing characteristics of the nonlinear compensation according to brightness of a place in which the display device is installed.

10 2. The image signal processing method of claim 1, wherein
in the nonlinear compensation, an image signal after compensation is an image signal proportional to the image signal before compensation raised to a γ -th power ($\gamma > 1$); and
as the place in which the display device is installed is
15 brighter, a value of γ is set smaller.

3. The image signal processing method of claim 1, wherein characteristics of the nonlinear compensation is set so that brightness human beings feel is linear with respect to the image signal before
20 compensation.

4. An image signal processing method for performing nonlinear compensation on an image signal to be fed into a display device, the method comprising:
25 changing characteristics of the nonlinear compensation according to brightness of a place in which the display device is installed and a maximum luminance the display device displays.

5. The image signal processing method of claim 4, wherein

in the nonlinear compensation, an image signal after compensation is an image signal proportional to the image signal before compensation raised to a γ -th power ($\gamma > 1$); and

5 as the place in which the display device is installed is brighter, a value of γ is set smaller, and as the maximum luminance the display device can display is larger, the value of γ is set larger.

6. An image signal processing unit for performing nonlinear compensation on an image signal to be fed into a display device, the unit comprising:

an ambient light detector for detecting brightness of a place in which the display device is installed; and

an compensator for receiving a detection result from the ambient light detector and performing nonlinear compensation on the image signal before compensation to convert to an image signal after compensation, the compensator comprising:

a plurality of look-up tables each having different nonlinear compensation characteristics; and

20 a look-up table selector for selecting one look-up table from among the plurality of look-up tables according to the detection result from the ambient light detector.

7. An image signal processing unit for performing nonlinear compensation on an image signal to be fed into a display device, the unit comprising:

an ambient light detector for detecting brightness of a place in which the display device is installed; and

an compensator for receiving a detection result from the ambient light detector and a signal indicating a maximum luminance the display device displays, and performing nonlinear compensation on the image signal before compensation to convert to an image signal
5 after compensation, the compensator comprising:

a plurality of look-up tables each having different nonlinear compensation characteristics; and

a look-up table selector for selecting one look-up table from among the plurality of look-up tables according to the
10 detection result from the ambient light detector and the maximum luminance the display device displays.

8. The image signal processing unit of claim 6 or 7, wherein a function of the plurality of look-up tables and the look-up table
15 selector is achieved by using a processor.

9. An image display device comprising the image processing unit of claim 6 or 7.